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ABSTRACT

The purpose of this paper is to examine the effectiveness of nonschool economic education programs, using as specific examples three Ohio companies--The Timken Company, B. F. Goodrich, and TRW. The objectives and content of the economic programs that each of these company offers it employees are described, and the procedures used to evaluate each program's effectiveness are discussed. The companies' economic programs include elements that suggest program success. For example, the programs take into consideration the employees' needs and interests. The companies are committed to economics education and the provision of programs that are not self-serving and avoid being propagandistic. One of the companies believes, however, that basic economic knowledge should be provided through adult or college education, with industry providing additional on-going economics programs. The companies' internal evaluations showed that their economic programs are enthusiastically received by employees. However, the success and effectiveness of the nonschool economic education program cannot be determined until a standardized objective instrument is developed for evaluative purposes. (RM)

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EFFECTIVENESS OF ECONOMIC EDUCATION PROGRAMS WITH EMPLOYEES: A STUDY FROM THE PERSPECTIVE OF B. F. GOODRICH TIRE GROUP, TRW, AND THE TIMKEN COMPANY

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INTRODUCTION

The vast majority of research in economic education to date has been devoted to exploring some portion of the production function as it is applied to traditional school economic education programs. Essentially, economic education research is concerned with defining and measuring outputs or with the effect on outputs of various alternative inputs.[1] This type of research is consistent with the stated goals of the Joint Council on Economic Education to promote the teaching and learning of economics in public and private schools through cooperative economic education programs. Yet the question, "How effective are economic education programs in a nonschool setting?" has been basically ignored. An adult market for economic education is clearly present, as represented by the number of companies currently involved in adult economic programs,[2] but that does not predict how well this market is being satisfied.

Most citizens have had at some point in their lives experience with a full range of economic activities, including working, buying, trading, owning, and saving, although the majority of people have never taken and never will take a formal economics course in any school. Little research has actually confronted the question of whether too few people have been offered any type of economic information or if the offering has been the "wrong" economics. Again, the need exists to determine how effective are the programs that are designed for dealing with

the critical economic areas that concern adults.

For this study, I have chosen three Ohio companies, The Timken Company, B. F. Goodrich, and TRW. Each has determined that a breakdown in the dissemination of economic information has occurred, and they have assumed the role of combating economic illiteracy among their employees. Each company is a multi-national manufacturing corporation with headquarters in northern Ohio, and each is presenting a program developed since 1980. Economics, to these employers, is worth the opportunity cost of presenting it.

METHODOLOGY

The intention of this paper is to examine the effectiveness of nonschool economic education programs, sighting as specific examples The Timken Company, B. F. Goodrich, and TRW. As these programs are discussed, consideration will be given to the product produced and analysis of the program based on previous research. The most comprehensive research study, concerning economic education within the workforce, was completed by Myron Emanuel in 1979.[3] His findings, summarizing corporate goals, procedures, and instruments measuring success, will be used for comparison purposes among the three companies under investigation and companies previously experiencing economic education programs. Specifically, Emanuel's study provides guidance for determining if any definite procedure has been designed to measure the effectiveness of economic education programs in industry.

Further examination will be given to the question of what kind or kinds of economic education to produce, because it provides what the "buyers" want. Before measuring effectiveness, we need to discern if we are to satisfy the objectives of top management or the employee objectives. Determination of economic education program content depends on the motives of the buyer and his understanding of what satisfies the final consumer. Finally, we will explore the question of the effectiveness or success of the three companies' economic education programs.

DISCUSSION

Definitions collected from various state mandates, textbooks, research reports, and federal directives agree, in essence, to these elements that economic education should:

1) Effort to impart the understanding of economic concepts that will prepare consumers to participate intelligently in the marketplace and in the economy.
2) Effort to impart the understanding of the interaction among various government and private agencies affecting economic activity.
3) Effort to impart the skills needed by individuals and groups in managing resources.
4) Educating people to recognize alternatives and make rational choices[4] in light of their own values and personal responsibilities.

Recognizing the possible components of an economic education program, we can also identify the undesirable characteristics. Economic education, ideally, should not be propagandistic or politically based. In any program, the emphasis should be on teaching the principles as identified within the definition, and applying these principles, logically to analyze contemporary issues and events, the end result manifested as consumer power.

Since the publication of Emanuel's study,[5] conditions have changed. Emanuel's conclusions are not the definitive answer. We use them only as a supportive measure of our findings. Companies involved in ongoing programs in the 1970's have terminated their commitment to economic understanding, due in large part to the economic recession. Economic education is approached by many companies as a secondary program. When a company is plagued with declining profits, or struggling for survival, it must abolish all non-essential cost. Economic education becomes a cost which is not justified by the benefit. Some other programs simply out-lived the interest, and the program was terminated. The change in attitude of other companies involved in Emanuels's study forced a change in direction of the program. An elevation in the level of economic awareness of the employee, attributed in large measure to the recent economic recession, has resulted in the demand by employees for increasingly sophisticated employee program. Added to this is the new wave of cooperation between labor and management, with management responding by developing participative employee training programs that include relevant economic education segments. In these instances, management is no longer dictating content, but is now soliciting input from the employees who will be directly effected.

The Timken Company, Canton, Ohio, has pursued organized economic education programs within their company since 1980. Every one of their training seminars for various department -

groups, including managers, supervisor, and sales engineers, incorporate elements of the private enterprise philosophy. Timken expects their supervisors to be knowledgeable in areas pertaining to economic principles, so they can respond intelligently when questioned about an area such as job security or corporate profit. An equally important objective of Timken's program is establishing effective communication lines among employees.

Timken was cautious in designing their program to avoid propagandising, according to the director, Dr. Ed Shillig, who holds a Ph.D. in Economic Education. They are attempting to reach the target market, consisting of employees, with content areas concerning self-interest, private property, free markets, government involvement, and the customer and the competition. Appointment of the economic education director, Dr. Schillig, reinforces Timken's desire to maintain objectivity. Dr. Schillig has a background of teaching and involvement in academic activities. He is an educator, and recognizes the principles of education when developing these industrial programs.

Dr. Schillig emphasizes the importance of economic education for employees, and expresses the view that the corporate sector should assume the responsibility for employees' economic education. "If the company doesn't assume the role, then who should?" asks Dr. Schillig. He believes that, thus far, elementary and secondary teachers are not properly trained to teach market economics. Implications of this statement would lead us to ask

if no economics should be presented prior to becoming an employee, assuming that a corporate program is being conducted. In the case, we should assume that the incidence of economic illiteracy would increase rather than decrease. Consideration of the alternative would have us accept that responsibility not lie solely with either the industrial or the academic community. Rather, it should be a joint effort with each party contributing the expertise of their field, resulting in the benefit of the general welfare. Timken is fortunate in that they possess the necessary blend of teaching expertise and industrial knowledge within one person.

Dr. Shillig indicated that Timken's program has been received with encouragement, enthusiasm, and the desire of employees for additional information. In conclusion, Timken would rate their program as successful. Similar to the respondents in Emanuel's study, Timken used a survey as a method for determining success.[6] Indeed, this program may be successful according to the objectives established by Timken management. Is that a satisfactory reply to "How effective are economic education programs in a nonschool setting?" It may well be, given that all companies involved in such programs have the same established objectives,[7] and that the buyers or consumers are identical. Yet, we still have not determined long-range program effects. I would suggest that, although Timken has identified a need for employee economic education, the experience of one company is not conclusive evidence to determine an answer as to

program effectiveness in a nonschool setting. It does not provide a substantial basis for further observation.

Emanuel concluded in his study that continuity to a program is vitally important and this fact is also apparent to Timken, evidenced by their determination to hold, periodically, update economic education sessions. In connection with these, their public relations department is responsible for a monthly publication, Clipboard, conveying not only information about Timken, but also relevant economic issues pertinent to employees. Timken is planning expansion of their program, in the very near future, while continuing to emphasize quality of content.[8]

The B. F. Goodrich Tire Group has been dedicated to economic education for several years, beginning in 1976. Their current four-part economic education series slated to begin this year is one segment of their total employee information and communication program. This program consists of several integral sections. A series of programs termed business information presentations deals with economic information and business strategies and goals. The Tire Group Management Seminar Series is devoted to current economic issues and concerns, while the Quarterly Review of Operations keeps Tire Group managers informed of current business results. Finally, offered to all Akron Tire Group employees is Business Economics and BFG. Participants in this program develop an understanding of how a business works, and are involved in making critical business decisions. The B. F. Goodrich Tire Group also follows the proven philosophy that

economic education works well when integrated into an already existing, on going communications program. Each of the elements in Goodrich's program combine to form a cohesive and meaningful entity.

The B. F. Goodrich Tire Group, with the support,commitment, and involvement of top management, will be offering an economic education series constructed under The Tire Group's philosophy of the employee-involvement process. An employee cannot be involved is a business without first understanding that business. "A survey conducted for The Tire Group by Towers, Perrin, Forster, and Crosby identified five topics of greatest concern and interest to employees: profit, productivity, government and government action, job security, and prices and cost."[9] From these topics, the core program was structured which includes profit, productivity, capital investment, and the role of government. Goodrich determined that employees have a high degree of interest in their own plant or work location. Their program is designed to comply with this interest.

"The first part (of the program) consists of a videotape program, featuring Dr. Dennis Weidenaar of Perdue University, who explains each economic concept as it relates to the entire economy. The second part consists of a slide/tape program which develops each economic concept more specifically as it relates to B. F. Goodrich and to the Tire Group. The third part will be a discussion session, led by a local employee, which will provide specific plant information as it relates to the economic concept

under discussion," explains Ms. Jackie Ross, Goodrich's communication representative and program developer.[10]

As stated previously, an economic education program should not be propagandistic, an ideal that Goodrich adheres to and wants to reflect in their program formula. To achieve this objective, Jackie Ross cooperated with Dr. Weidenaar, to develop a program of employee economic education that maintained the lines of objectivity. Incorporated into this program will be an evaluation instrument to accurately predict the success of the program, based on a set of predetermined criteria, allowing for later adjustment in program curriculum.[11]

This program does not have provision for maintaining interest during the interim period between sessions, which may be extensive, and result in the higher cost of lost employee response. To recreate employee motivation and concern for each session would mean wasted time, both in program delays and employee hours. Perhaps the Tire Group will analyze the possibility of this problem occurring and offer alternative solutions before the reality materializes.

TRW, involved in economic education in the late 1970's, and cited by Emanuel as one of the outstanding programs in his study, has experienced a change of attitude toward economic education, precipitating a change of position. According to Harrison Johnson, Director of Communications at Cleveland TRW, their original program avoided the trap of propaganda that most companies enter when extolling the virtues of the free enterprise

system, was relevant, well received, and extremely successful for approximately three years. Then the program died. He attributes its death to the fact that macroeconomic education, per se, was a national fad that did not address microeconomics or plant level issues, and so outlived its interest.[12]

Referring to economic education as a "fad" may be a misnomer. Understanding economic principles and functioning within the economic system is not knowledge to be acquired by only a small percentage of the citizeny and then no longer necessary to further groups. Perhaps another, more accurate interpretation might suggest that if a substantial economic foundation is established during the mandatory school years, further macroeconomic education would not be necessary at an adult level. It is then appropriate to build on the foundation with additional, more complex training focusing on a micro content. Continued reinforcement of basic economic principles must be incorporated into the program content to avoid loss in retention.

If a quality economic education program is presented to a child for twelve years or longer in the case of college students, it does not insure that this knowledge will remain with the individual throughout his adult life, and the need for additional exposure is unnecessary. According to a study conducted by Paul Saunders with students that received instruction in college introductory economics, the economics courses did have a lasting impact on students' performance as measured by a specially constructed multiple-choice test. He did conclude through

further testing that the lasting effects appear to diminish over the years. Over a period of seven years, Saunders indicated an implied annual rate of depreciation of economic knowledge of about 6 percent.[13] Since the majority of employees involved in a company program would not be exposed to a college economics course, the rate of depreciation of economic knowledge would certainly increase. Based on this information, we must question any philosophy which prescribes to arbitrarily discontinuing economic education at some predetermined age limit.

Johnson proposes the view that economic education in industry may soon be replaced by employee participative-management training courses. This type of training will include elements of economic education, but the basis for a complete program of economic consideration must be obtained through alternative sources, i.e. college or adult education. TRW maintains the importance for employees to understand the free-market system, not necessarily at the macro level, but emphasizing micro analysis. This basic economic knowledge, obtained elsewhere, would be a support area of the company sponsored management training.

Mr. Johnson strongly proclaimed that cooperation between industry and academia should exist when developing any type of teaching program in industry. Exception was taken to the warning for educators to be "extremely wary" of business because business is "motivated by some grand design stemming from a vested interest to exploit children and educators." This theory is being pre-empted by a new trend in academics - one that is not anti-

business, resulting in an increased cooperation between industry and education. TRW's purpose was distinctly described as not to be self-serving for only company objectives, but that an informed citizen is necessary for the general well-being of society.[14]

Although each of the company experiences described include elements that would obviously suggest program success, the fundamental question, "How effective, or successful, is the non-school economic education program?" has not been accurately answered. Effectiveness, unless measured according to a set of predetermined objective criteria assigned specific value, becomes a subjective determination. Effectiveness is also measured, in part, by defining the buyer and his motives or objectives. Is the program actually meeting the needs of those consuming the output? Effectiveness is evaluated in terms of lasting effects. Does the program have an immediate impact on the attitudes or actions of the participants, and is that impact as strong in one year, five years, or ten years after completing the program?

Emanuel reported that thirty-six percent of his respondents used a formal survey (i.e. Timken) or other measurement device, as developed by individual program coordinators, to determine program success, while another seventy-two percent indicated that their efforts had been successful. No company reported an "unsuccessful" program.[15] Yet, this information is subjective. We have no set criteria for defining success, no uniform measuring device, and no test for retention. We have virtually no basis for comparison. Each program may have contained similar

elements as were described in our three examples, but we have yet to determine a concrete basis for comparison. Based on the information given concerning the companies chosen as models, we cannot accurately compare their programs for determining the effectiveness of nonschool economic education programs. It is my suggestion that all nonschool corporate economic education programs be surveyed and characterized according to content and objectives. Common characteristics should be isolated and a standardized objective tool developed for evaluative purposes. This would, in part, enhance the continuity of all nonschool economic education programs while providing some general guidelines for creating new programs. The market for employee economic education exists and companies are filling the perceived need, but we cannot determine if their efforts are really successful.

Exception to this statement is the case of B. F. Goodrich Tire Group. An evaluative instrument has been built into the program, but, at this time, it is too early to make judgements as to the reliability of the procedure. However, the technique does warrant careful observation. It may prove to be the catalyst for future answers to the question of how effective are nonschool economic education programs.

CONCLUSION

A market demand for nonschool adult economic education programs does exist, and I predict that this market trend will continue for several years. The fact that programs such as

Timken's, B. F. Goodrich Tire Group's, and TRW's were conceived and are now operational attests to industry's commitment toward economic education.

As B. F. Goodrich sought input and council from academia, so, as the demand increases, will other companies seek advice from educators as they initiate economic education programs. Are we, the educators, prepared to answer the questions and provide the guidance requested? If not, we will certainly miss an opportunity to participate in this segment of economic education. The observations offered here are barely the beginning. We need to investigate further which outputs should be produced. Answers to the questions of who are the consumers, what do they want, and do the consumers really possess the necessary information to judge the quality of the product need to be found. Further research is needed to ultimately answer the question, "How effective are economic education programs in a nonschool setting?"

FOOTNOTES

[1] Burton A. Weisbrod, "Research on Economic Education: Is It Asking the Right Questions?", American Economic Review, May, 1979, 15-18.

[2] "Economic Education Programs and Resources Directory", (National Association of Manufacturers).

[3] Myron Emanuel, Corporate Economic Education Programs: An Evaluation and Appraisal, (Financial Executive Research Foundations, 1979), 337-339.

Summary of his findings are as follows:

1) In the 1970's, the vast majority of U.S. business organizations have not entered the economic education arena, nor do they have plans of doing so in the future.
2) of the 130 programs reported, 70 percent were on going in nature.
3) seventy percent of the reporting companies had as their primary target the employee group.
4) the responding companies ranked as their three highest objectives:
   a) improve understanding of economic principles
   b) improve audience attitude toward businesses in general
   c) explain the free enterprise system
5) thirty-six percent of the respondents used a formal survey or other measurement device to determine program success. Seventy-two percent indicated program success, while sixteen percent were unsure of success. No company reported an unsuccessful program.
6) of respondents, seventeen percent were unsure of program cost.

[4] U. S. Department of Education, Office of Consumer Education, Integrating Consumer and Economic Education into the School Curriculum, by Judith Staley Brenneke, 2.

[5] Emanuel, 1979, 337-339.

[6] Within the survey, one question asked of the goups of eighteen participants each is: "Are you better able to address issues and communicate with employees about free enterprise?" Results were:

Scale of negative (1) to positive (5)

Group	Response
1	4.59
2	3.90
3	4.33
4	3.62
5	4.05
6	4.13
7	4.50
8	4.08

The lower rating of group four was directly related to that group being taught by a different instructor.

[7] The objective of Timken's economic education program will not be reproduced in this paper, by agreement during the interview with Dr. Shillig.

[8] Telephone interview with Dr. Ed Shillig, The Timken Company, Canton, Ohio, 20 December 1983.

[9] Exerpt of comments made by Jackie Ross in reference to B. F. Goodrich Tire Group employee information program, 7 February 1984.

[10] Ibid.

[11] Telephone interview with Jackie Ross, B. F. Goodrich Company, Akron, Ohio, 20 December 1983.

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